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EXAMINER

MAPA, MICHAEL Y

ART UNIT	PAPER NUMBER
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2617

MAIL DATE	DELIVERY MODE
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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/588,450	Applicant(s) GIARETTA ET AL.	
	Examiner Michael Mapa	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 November 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 119-182 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 119-182 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The applicant has amended the following:

Claims: 119-182 have not been amended.

Claims: 1-118 have been cancelled.
2. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Response to Arguments

3. Applicant's arguments with respect to claims 119-182 have been considered but are moot in view of the new ground(s) of rejection.

The applicant argues features wherein a method for negotiating the provision of a mobile IP service between a mobile node and a server in a network comprising providing an authentication protocol establishing a pass through transport between said mobile node and said server and negotiating the provision of said mobile IP service via said authentication protocol over said pass through transport and wherein negotiating the provision of said mobile IP service comprises authorizing said mobile node to use said mobile IP service and communicating to said mobile node a set of options for use of said mobile IP service.

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4. Before addressing the applicant's arguments, the examiner would like to clarify the position taken with respect to the applied art:

Oyama discloses a method, system and apparatus to support hierarchical mobile IP services wherein Oyama discloses using an extended EAP authentication protocol that carries related information facilitating discovery of MAP, dynamic allocation of MAP and RCoA, distribution of security keys between the mobile node (MN) and MAP and possible piggyback of HMIPv6 mobility procedures to authenticate the mobile node, therefore negotiating provision of a mobile IP service between a mobile node and a server via an authentication protocol. Oyama discloses an advantage of using EAP is that the AAA client is allowed to be agnostic and act as a mere pass through agent. Oyama continues to discloses the AAAh server sending the authorization/configuration information such as MAP address, RCoA, HA address, MN home address and security association information along with an authentication success indication back to the MN, therefore authorizing said mobile node to use said mobile IP service and communicating to said mobile node a set of options for use of said mobile IP service.

Koskiahde discloses using multihoming techniques by supporting and transmitting multiple care of addresses in the mobile IPv6 protocol wherein one of the care of addresses is chosen as a primary care of address according to criteria such as free bandwidth, reliability and/or cost.

With regards to the applicant's arguments that Oyama is not eligible as prior art because the critical reference date of Oyama appears to be June 15, 2004 while the applicant's national phase of PCT application is filed February 6, 2004 and is therefore before the filing date of Oyama. The examiner respectfully disagrees. Oyama's PCT filing date is June 15, 2004 but has priority with provisional application No. 60/479156 which was file on June 18, 2003.

With regards to the applicants arguments that Oyama's application and its provisional application are not the same because the provisional application fails to disclose "negotiating the provision of said mobile IP service via said authentication protocol over said pass through transport wherein negotiating the provision of said mobile IP service comprises authorizing said mobile node to use said mobile IP service and communication to said mobile node a set of options for use of said mobile IP service." The examiner respectfully disagrees. As stated in the new grounds of rejection provided in this office action, the provisional application of Oyama discloses "negotiating the provision of said mobile IP service via said authentication protocol over said pass through transport" (Paragraph [0086] of Oyama Page 8, Lines 1-8 & Page 11, Lines 1 – 9 of the provisional application, wherein Oyama discloses the extended EAP authentication protocol to carry HMIPv6 related information facilitating for example discovery of MAP, dynamic allocation of MAP, RCoA, distribution of security keys between the MN and MAP). The provisional application of Oyama discloses "wherein negotiating the provision of said mobile IP service comprises authorizing said mobile node to use said mobile IP service and communicating to said mobile node for use of

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said mobile IP service” (Paragraph [0086] & [0192]-[0193] of Oyama & Page5 Lines 20-25 of the provisional application, wherein Oyama discloses the extended EAP authentication protocol carrying HMIPv6 related information facilitating discovery of MAP, dynamic allocation of MAP, RCoA and distribution of security keys between MN and MAP as well as disclosing the AAAh server sending the authorization/configuration information along with an authentication success indication back to the MN).

Oyama fails to explicitly recite “communicating to said mobile node a set of options for use of said mobile IP service.” However, the teachings of Koskiahde disclose the missing limitations.

5. Therefore, the argued limitations read upon the cited references or are written broad such that they read upon the cited references, as follows:

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 119-182 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oyama et al. (US Patent Publication 2006/0185013 herein after referenced as Oyama)

in view of Koskiahde et al. (US Patent Publication 2004/0246939 herein after referenced as Koskiahde).

Regarding claim 119, Oyama discloses:

The applicant claims "A method for negotiating the provision of a mobile IP service between a mobile node and a server in a network" (Fig. 3 & Paragraph [0057] of Oyama & Page 11, Lines 1 – 9 of the provisional application, wherein Oyama discloses bootstrapping the HMIPv6 service for a mobile node based on an AAA infrastructure).

The applicant claims "comprising the providing an authentication protocol establishing a pass-through transport between said mobile node and said server" (Fig. 3 & Paragraphs [0086] & [0088] of Oyama & Page 8, Lines 1-8 & Page 11, Lines 1 – 9 of the provisional application, wherein Oyama discloses using an extended EAP authentication protocol and wherein the use of EAP allows the AAA client and AAAv to act as mere pass-through agents).

The applicant claims "and negotiating the provision of said mobile IP service via said authentication protocol over said pass-through transport" (Paragraph [0086] of Oyama Page 8, Lines 1-8 & Page 11, Lines 1 – 9 of the provisional application, wherein Oyama discloses the extended EAP authentication protocol to carry HMIPv6 related information facilitating for example discovery of MAP, dynamic allocation of MAP, RCoA, distribution of security keys between the MN and MAP).

The applicant claims "wherein negotiating the provision of said mobile IP service comprises: authorizing said mobile node to use said mobile IP service; and

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communicating to said mobile node for use of said mobile IP service” (Paragraph [0086] & [0192]-[0193] of Oyama & Page5 Lines 20-25 of the provisional application, wherein Oyama discloses the extended EAP authentication protocol carrying HMIPv6 related information facilitating discovery of MAP, dynamic allocation of MAP, RCoA and distribution of security keys between MN and MAP as well as disclosing the AAAh server sending the authorization/configuration information along with an authentication success indication back to the MN).

Oyama discloses transmitting optional quality of service (QoS) parameters (Paragraph [0038] of Oyama and Page 6, Lines 1-6 of the provisional application). However, Oyama fails to explicitly recite “communicating to said mobile node a set of options for use of said mobile IP service.”

In a related field of endeavor, Koskiahde discloses:

The applicant claims “communicating to said mobile node a set of options for use of said mobile IP service” (Paragraph [0036] of Koskiahde, wherein Koskiahde discloses multihoming and sending multiple care of addresses and choosing a primary care of address according to the reliability, free bandwidth and cost).

Therefore it would have been obvious to one of ordinary skill in the art to modify the invention of Oyama to incorporate the teachings of Koskiahde of using multi-homing and sending multiple care of addresses (CoA) and selecting the CoA depending on the QoS needed for the purpose of improving the system versatility and efficiency by having a QoS parameter that selects the best primary CoA for the service depending on free bandwidth, reliability and/or cost (Paragraph [0036] of Koskiahde).

Regarding claim 120, Oyama in view of Koskiahde discloses:

The applicant claims "The method of claim 119, wherein said authentication protocol is extensible authentication protocol (EAP)" (Paragraph [0086] of Oyama).

Regarding claim 121, Oyama in view of Koskiahde discloses:

The applicant claims "The method of claim 120, comprising selecting said transport as either of a level-2 or level-3 EAP transport" (Paragraph [0089] of Oyama, wherein Oyama discloses using PANA or IEEE 802.1x).

Regarding claim 122, Oyama in view of Koskiahde discloses:

The applicant claims "The method of claim 120, comprising providing in said network a client node between said mobile node and said server, wherein said client node plays a pass-through role and is not involved in said negotiation" (Fig. 3 & Paragraph [0088] of Oyama, wherein Oyama discloses the AAA client and AAAv acting as pass-through agents).

Regarding claim 123, Oyama in view of Koskiahde discloses:

The applicant claims "The method of claim 122, comprising providing between said client node and said server an EAP transport selected from diameter and radius" (Fig. 3 & Paragraph [0090] of Oyama, wherein Oyama discloses using Diameter protocol).

Regarding claim 124, Oyama in view of Koskiahde discloses:

The applicant claims "The method of claim 122, comprising configuring said client node as a point of attachment to said network working as an access point" (Fig. 3 & Paragraphs [0072] of Oyama, wherein Oyama discloses the authorization information

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being sent via the AAA infrastructure, therefore a point of attachment to said network working as an access point).

Regarding claim 125, Oyama in view of Koskiahde discloses:

The applicant claims "The method of claim 122, comprising configuring said client node as a point of attachment to said network working as a router" (Fig. 3 & Paragraphs [0072]-[0073] of Oyama, wherein Oyama discloses the authorization information being sent via the AAA infrastructure and wherein the AAAv does not see the transaction and only acts as a pass through agent, therefore a point of attachment to said network working as a router).

Regarding claim 126, Oyama in view of Koskiahde discloses:

The applicant claims "The method of claim 119, wherein said negotiating further comprises at least one of: dynamically configuring a set of parameters required for using said mobile IP service; and configuring further options related to said mobile IP service" (Paragraph [0086] of Oyama, wherein Oyama discloses the extended EAP authentication protocol carrying HMIPv6 related information facilitating discovery of MAP, dynamic allocation of MAP, RCoA and distribution of security keys between MN and MAP).

Regarding claim 127, Oyama in view of Koskiahde discloses:

The applicant claims "The method of claim 120, comprising routing messages for activating said mobile IP service between said mobile node and said server via said extensible authentication protocol (EAP) over said EAP transport upon at least one of said mobile node power up or connection of said mobile node to said network"

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(Paragraphs [0086] & [0057] of Oyama, wherein Oyama discloses the extended EAP authentication protocol carrying HMIPv6 related information and wherein the HMIPv6 service is bootstrapped to the mobile node operating in the home network or roaming in a visited network).

Regarding claim 128, Oyama in view of Koskiahde discloses:

The applicant claims "The method of claim 119, comprising: providing in said network a home agent for communicating with said server; and maintaining within said home agent configuration information for providing said mobile IP service" (Paragraph [0138] of Oyama, wherein Oyama discloses the HA (Home Agent) sending the binding acknowledgement packet to the MN via AAAh during the authentication and authorization exchanges).

Regarding claim 129, Oyama in view of Koskiahde discloses:

The applicant claims "The method of claim 128, comprising providing an AAA backbone protocol for transferring said configuration information between said home agent and said server" (Paragraph [0090] of Oyama, wherein Oyama discloses using a diameter protocol for communication).

Regarding claim 130, Oyama in view of Koskiahde discloses:

The applicant claims "The method of claim 119, comprising performing, upon at least one of said mobile node power up or connection of said mobile node to said network, a bootstrap procedure including steps selected from: authorizing said mobile node to use said mobile IP service, communicating to said mobile node options for use within said mobile IP service, configuring the parameters for use of said mobile IP

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service, and configuring service options communicated to said mobile node”

(Paragraphs [0192] - [0193] of Oyama, wherein Oyama discloses a MN requesting to bootstrap MIPv6 and wherein the AAAh communicates with the HA and MAP and sends authorization information such as MAP address, RCoA, HA address, MN address and security association to the MN).

Regarding claim 131, Oyama in view of Koskiahde discloses:

The applicant claims “The method of claim 130, wherein said parameters comprise at least one of: a home address for use by said mobile node, the address of an associated home agent allotted thereto, and cryptographic data for bootstrapping a security association with said home agent” (Paragraphs [0192] - [0193] of Oyama, wherein Oyama discloses a MN requesting to bootstrap MIPv6 and wherein the AAAh communicates with the HA and MAP and sends authorization information such as MAP address, RCoA, HA address, MN address and security association to the MN).

Regarding claim 132, Oyama in view of Koskiahde discloses:

The applicant claims “The method of claim 119, comprising: performing said method while said mobile node is roaming within a network different from the network of its home provider; and providing a proxy for communication between said mobile node and said server under said roaming conditions” (Fig. 2 & Paragraph [0065] of Oyama, wherein Oyama discloses the MN roaming in a visited network and communicating with the home network by using the AAA infrastructure to link the visited network and the home network).

Regarding claim 133, Oyama in view of Koskiahde discloses:

The applicant claims “The method of claim 120, comprising at least one of: said mobile node sending a respective identifier toward said server, setting up a transport layer security tunnel between said mobile node and said server to protect authentication information, authenticating said mobile node with said server, closing said EAP communication after authenticating said mobile node and negotiating said mobile IP service therefor, and negotiating a security association between said mobile node and a respective home agent” (Paragraphs [0072] - [0073] of Oyama, wherein Oyama discloses using an extended EAP protocol and sending HMIPv6 authorization information to the MN via the AAA infrastructure, wherein the AAAv does not see the transaction and having an “end to end procedure” for HMIPv6 authentication and authorization).

Regarding claim 134, Oyama in view of Koskiahde discloses:

The applicant claims “The method of claim 133, comprising, in association with said authentication, the step of said mobile node and said server exchanging a set of attributes selected from attributes for authorizing, negotiating and configuring said mobile IP network” (Paragraphs [0187] – [0188] of Oyama, wherein Oyama discloses the MN and AAAh sending challenges and challenge responses as well as EAP methodology and attributes).

Regarding claim 135, Oyama in view of Koskiahde discloses:

The applicant claims “The method of claim 133, wherein said negotiating said security association involves an IKE negotiation” (Paragraph [0223] of Oyama, wherein

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Oyama discloses using the IKE framework to distribute dynamic preshared keys for MN and HA).

Regarding claim 136, Oyama in view of Koskiahde discloses:

The applicant claims "The method of claim 133, wherein said authentication is based on a defined EAP method" (Paragraph [0173] of Oyama, wherein Oyama discloses using an EAP authenticator).

Regarding claim 137, Oyama in view of Koskiahde discloses:

The applicant claims "The method of claim 133, wherein said authentication is SIM-CARD based" (Paragraph [0191] of Oyama, wherein Oyama discloses the shared secret key by MN and AAAh to be between the identity module such as a SIM card and the home network operator).

Regarding claim 138, Oyama in view of Koskiahde discloses:

The applicant claims "The method of claim 119, wherein said negotiating comprises the step of said mobile node sending toward said server a message comprising a set of information items selected from: service selection information items indicating the mobile node choice to activate said mobile IP service, service option information items, representative of the service options to be activated, an indication of a mobile node's preferred home agent, an indication of a mobile node's preferred home address, and an interface identifier for use by a home agent for constructing the mobile node's home address" (Paragraphs [0188] & [0192] of Oyama, wherein Oyama discloses the MN desiring and requesting to bootstrap MIPv6).

Regarding claim 139, Oyama in view of Koskiahde discloses:

The applicant claims “The method of claim 119, wherein said negotiating comprises said server selectively identifying a home agent for providing said mobile IP service” (Paragraph [0153] of Oyama, wherein Oyama discloses the AAAh notifying the authenticated MN of an address of a dynamic allocated HA, wherein the HA was found using the dynamic home agent discovery method of the MIPv6 protocol).

Regarding claim 140, Oyama in view of Koskiahde discloses:

The applicant claims “The method of claim 139, comprising: said server sending a home address request message to said home agent comprising an identifier for said mobile node” (Paragraph [0128] of Oyama).

The applicant claims “and said home agent allotting a home address for said mobile node” (Paragraph [0153] of Oyama). The examiner maintains and takes official notice that it is commonly known in the art for an identifier for said mobile node to be included in the request and used as can be seen for reference purposes only in Column 2 Lines 5-9 of Smith (US Patent 7106710).

Regarding claim 141, Oyama in view of Koskiahde discloses:

The applicant claims “The method of claim 140, wherein said allotting said home address comprises utilizing a mobile node's indicated interface identifier.” The examiner maintains and takes official notice that it is commonly known in the art for an identifier for said mobile node to be used in determining a home agent as can be seen for reference purposes only in Column 2 Lines 5-9 of Smith (US Patent 7106710).

Regarding claim 142, Oyama in view of Koskiahde discloses:

The applicant claims “The method of claim 140, comprising said home agent performing a duplicate address detection for said home address.” The examiner maintains and takes official notice that it is commonly known in the art for IPv6 to use a mechanism known as “duplicate address detection” to for the purpose of determining if an address conflict exists as can be seen for reference purposes only in Paragraph [0032] of O’shea et al. (US Patent Publication 2002/0152380 herein after referenced as O’shea).

Regarding claim 143, Oyama in view of Koskiahde discloses:

The applicant claims “The method of claim 142, comprising, upon successful completion of said duplicate address detection, said home agent preventing said home address allotted from being allocated to another user.” The examiner maintains that it is commonly known in the art for IPv6 to use a mechanism known as “duplicate address detection” to for the purpose of determining if an address conflict exists and if there is to use a modified address, therefore preventing said home address from being allocated to another user, as can be seen for reference purposes only in Paragraph [0032] of O’shea et al. (US Patent Publication 2002/0152380 herein after referenced as O’shea).

Regarding claim 144, Oyama in view of Koskiahde discloses:

The applicant claims “The method of claim 143, comprising providing a binding cache and registering in said binding cache a dummy entry comprising said home address and an unspecified address as a care-of address” (Paragraph [0084] of Oyama, wherein Oyama discloses a binding cache comprising a RCoA and an LCoA). Oyama discloses “whereby any binding update reaching said home agent does not lead

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to the creation of a new entry” (Paragraph [0073] of Oyama, wherein Oyama discloses the MAP reduces the number of binding updates that go to the HA).

Oyama in view of Koskiahde fails to explicitly recite “providing the home agent with a binding cache.” However, the examiner maintains that it is obvious to one of ordinary skill in the art to modify the invention of Oyama to incorporate the teachings of the MAP component into the HA for the purpose of saving network resources by reducing the number of components.

Regarding claim 145, Oyama in view of Koskiahde discloses:

The applicant claims “The method of claim 119, comprising: including in said network a home agent for providing said mobile IP service” (Paragraph [0192] of Oyama, wherein Oyama discloses a HA).

The applicant claims “configuring said server as a key distribution centre between said mobile node and said home agent” (Fig. 3 & Paragraphs [0192] – [0193] of Oyama, wherein Oyama discloses the AAAh processes the requests and communicate with both the MN and the HA, therefore a distribution center).

The applicant claims “sending from said server to said mobile node and said home agent cryptographic information to permit bootstrapping a security association between said mobile node and said home agent” (Paragraph [0192] – [0193] of Oyama, wherein Oyama discloses the MN requesting a MIPv6 bootstrap and wherein the AAAh sends the security association information along with authentication success to the MN).

Regarding claim 146, Oyama in view of Koskiahde discloses:

The applicant claims "The method of claim 119, comprising: including in said network a home agent for providing said mobile IP service" (Paragraph [0192] of Oyama, wherein Oyama discloses a HA).

The applicant claims "and said server sending to said home agent a home agent configuration request message comprising information items selected from: an identifier for said mobile node" (Paragraph [0192] of Oyama, wherein Oyama discloses the AAAh selecting a HA using another enhanced EAP session and the HA responding to the AAAh with information necessary to create the security association with the MN, therefore said server sending to the home again with a configuration request message. The examiner maintains and takes official notice that it is commonly known in the art for an identifier of said mobile node to be used when requesting the configuration message).

The applicant claims "an authorization lifetime indicating how long said mobile node is authorized to use said mobile IP service" (Paragraphs [0160] – [0161] of Oyama, wherein Oyama discloses an HA-MN key lifetime).

The applicant claims "bootstrap information for a security association between said mobile node and said home agent, and a set of policies for said home agent to manage said mobile node's traffic" (Paragraph [0192] – [0193] of Oyama, wherein Oyama discloses the MN requesting a MIPv6 bootstrap and wherein the AAAh sends the security association information along with authentication success to the MN).

Regarding claim 147, Oyama in view of Koskiahde discloses:

The applicant claims “The method of claim 146, comprising providing in said network a home agent for communicating with said server said set of policies” (Paragraph [0192] – [0193] of Oyama, wherein Oyama discloses the MN requesting a MIPv6 bootstrap and wherein the AAAh sends the security association information along with authentication success to the MN).

The applicant claims “comprising information items representative of filtering rules to be enforced by said home agent on the mobile node traffic” (Paragraph [0090] of Oyama, wherein Oyama discloses MIP filter rules).

Regarding claim 148, Oyama in view of Koskiahde discloses:

The applicant claims “The method of claim 120, comprising at least one of: said server sending an authorization message for said mobile IP service within an EAP message starting said authentication step; upon receiving the indication from said mobile node to activate said mobile IP service, said server sending a home address request message toward a selected home agent while continuing said authentication of said mobile node; and said server continuing said authentication procedure of said mobile node by completing configuration of a respective home agent for providing said mobile IP service before completing said authentication procedure” (Paragraphs [0192] – [0193] of Oyama).

Regarding claim 149, Oyama in view of Koskiahde discloses:

The applicant claims “The method of claim 120, comprising: selecting said network as a network using a respective authentication method other than EAP; and using said EAP transport for said step of negotiating, while providing authentication by

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said respective authentication method other than EAP” (Paragraphs [0190] – [0191] of Oyama).

Regarding claim 150, Oyama in view of Koskiahde discloses:

The applicant claims “The method of claim 149, comprising: selecting said network as a cellular network including a GGSN node” (Fig. 3 & Paragraph [0191] of Oyama, wherein Oyama discloses using standard sim cards used in GSM, therefore a cellular network and wherein Oyama discloses a HA (GGSN node)).

The applicant claims “and allotting to said mobile node an IP address by activating a PDP context, whereby a direct communication channel is established between said mobile node and said GGSN node” (Fig. 3 & Paragraphs [0073] and [0083] of Oyama, wherein Oyama discloses the AAAh using an extended EAP protocol to establish an “end-to-end procedure” from the MN to the AAAh and wherein the AAAh server is responsible for home address/agent assignment to the MN).

Regarding claim 151, Oyama discloses:

The applicant claims “A system for negotiating the provision of a mobile IP service between a mobile node and a server in a network” (Fig. 3 & Paragraph [0057] of Oyama, wherein Oyama discloses bootstrapping the HMIPv6 service for a mobile node based on an AAA infrastructure).

The applicant claims “comprising an authentication protocol for establishing a pass-through transport between said mobile node and said server” (Fig. 3 & Paragraphs [0086] & [0088] of Oyama, wherein Oyama discloses using an extended EAP

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authentication protocol and wherein the use of EAP allows the AAA client and AAAv to act as mere pass-through agents).

The applicant claims "and being configured for negotiating the provision of said mobile IP service via said authentication protocol over said pass-through transport" (Paragraph [0086] of Oyama, wherein Oyama discloses the extended EAP authentication protocol to carry HMIPv6 related information facilitating for example discovery of MAP, dynamic allocation of MAP, RCoA, distribution of security keys between the MN and MAP).

The applicant claims "wherein negotiating the provision of said mobile IP service comprises: authorizing said mobile node to use said mobile IP service; and communicating to said mobile node for use of said mobile IP service" (Paragraph [0086] & [0192]-[0193] of Oyama, wherein Oyama discloses the extended EAP authentication protocol carrying HMIPv6 related information facilitating discovery of MAP, dynamic allocation of MAP, RCoA and distribution of security keys between MN and MAP as well as disclosing the AAAh server sending the authorization/configuration information along with an authentication success indication back to the MN).

Oyama discloses transmitting optional quality of service (QoS) parameters (Paragraph [0038] of Oyama and Page 6, Lines 1-6 of the provisional application). However, Oyama fails to explicitly recite "communicating to said mobile node a set of options for use of said mobile IP service."

In a related field of endeavor, Koskiahde discloses:

The applicant claims “communicating to said mobile node a set of options for use of said mobile IP service” (Paragraph [0036] of Koskiahde, wherein Koskiahde discloses multihoming and sending multiple care of addresses and choosing a primary care of address according to the reliability, free bandwidth and cost).

Therefore it would have been obvious to one of ordinary skill in the art to modify the invention of Oyama to incorporate the teachings of Koskiahde of using multi-homing and sending multiple care of addresses (CoA) and selecting the CoA depending on the QoS needed for the purpose of improving the system versatility and efficiency by having a QoS parameter that selects the best primary CoA for the service depending on free bandwidth, reliability and/or cost (Paragraph [0036] of Koskiahde).

Regarding claim 152, Oyama in view of Koskiahde discloses “The system of claim 151.” The method claims disclosed above performs the functionalities that correspond to the apparatus/system of the system claims, therefore since the method claims are performing functionalities that corresponds with the apparatus/system performing the methods, the examiner rejects claim 152, with the same arguments provided above (see claim 120).

Regarding claim 153, Oyama in view of Koskiahde discloses “The system of claim 152.” The method claims disclosed above performs the functionalities that correspond to the apparatus/system of the system claims, therefore since the method claims are performing functionalities that corresponds with the apparatus/system performing the methods, the examiner rejects claim 153, with the same arguments provided above (see claim 121).

Regarding claim 154, Oyama in view of Koskiahde discloses “The system of claim 152.” The method claims disclosed above performs the functionalities that correspond to the apparatus/system of the system claims, therefore since the method claims are performing functionalities that corresponds with the apparatus/system performing the methods, the examiner rejects claim 154, with the same arguments provided above (see claim 122).

Regarding claim 155, Oyama in view of Koskiahde discloses “The system of claim 154.” The method claims disclosed above performs the functionalities that correspond to the apparatus/system of the system claims, therefore since the method claims are performing functionalities that corresponds with the apparatus/system performing the methods, the examiner rejects claim 155, with the same arguments provided above (see claim 123).

Regarding claim 156, Oyama in view of Koskiahde discloses “The system of claim 154.” The method claims disclosed above performs the functionalities that correspond to the apparatus/system of the system claims, therefore since the method claims are performing functionalities that corresponds with the apparatus/system performing the methods, the examiner rejects claim 156, with the same arguments provided above (see claim 124).

Regarding claim 157, Oyama in view of Koskiahde discloses “The system of claim 154.” The method claims disclosed above performs the functionalities that correspond to the apparatus/system of the system claims, therefore since the method claims are performing functionalities that corresponds with the apparatus/system

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performing the methods, the examiner rejects claim 157, with the same arguments provided above (see claim 125).

Regarding claim 158, Oyama in view of Koskiahde discloses “The system of claim 151.” The method claims disclosed above performs the functionalities that correspond to the apparatus/system of the system claims, therefore since the method claims are performing functionalities that corresponds with the apparatus/system performing the methods, the examiner rejects claim 158, with the same arguments provided above (see claim 126).

Regarding claim 159, Oyama in view of Koskiahde discloses “The system of claim 152.” The method claims disclosed above performs the functionalities that correspond to the apparatus/system of the system claims, therefore since the method claims are performing functionalities that corresponds with the apparatus/system performing the methods, the examiner rejects claim 159, with the same arguments provided above (see claim 127).

Regarding claim 160, Oyama in view of Koskiahde discloses “The system of claim 151.” The method claims disclosed above performs the functionalities that correspond to the apparatus/system of the system claims, therefore since the method claims are performing functionalities that corresponds with the apparatus/system performing the methods, the examiner rejects claim 160, with the same arguments provided above (see claim 128).

Regarding claim 161, Oyama in view of Koskiahde discloses “The system of claim 160.” The method claims disclosed above performs the functionalities that

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correspond to the apparatus/system of the system claims, therefore since the method claims are performing functionalities that corresponds with the apparatus/system performing the methods, the examiner rejects claim 161, with the same arguments provided above (see claim 129).

Regarding claim 162, Oyama in view of Koskiahde discloses "The system of claim 151." The method claims disclosed above performs the functionalities that correspond to the apparatus/system of the system claims, therefore since the method claims are performing functionalities that corresponds with the apparatus/system performing the methods, the examiner rejects claim 162, with the same arguments provided above (see claim 130).

Regarding claim 163, Oyama in view of Koskiahde discloses "The system of claim 162." The method claims disclosed above performs the functionalities that correspond to the apparatus/system of the system claims, therefore since the method claims are performing functionalities that corresponds with the apparatus/system performing the methods, the examiner rejects claim 163, with the same arguments provided above (see claim 131).

Regarding claim 164, Oyama in view of Koskiahde discloses "The system of claim 151." The method claims disclosed above performs the functionalities that correspond to the apparatus/system of the system claims, therefore since the method claims are performing functionalities that corresponds with the apparatus/system performing the methods, the examiner rejects claim 164, with the same arguments provided above (see claim 132).

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Regarding claim 165, Oyama in view of Koskiahde discloses “The system of claim 152.” The method claims disclosed above performs the functionalities that correspond to the apparatus/system of the system claims, therefore since the method claims are performing functionalities that corresponds with the apparatus/system performing the methods, the examiner rejects claim 165, with the same arguments provided above (see claim 133).

Regarding claim 166, Oyama in view of Koskiahde discloses “The system of claim 165.” The method claims disclosed above performs the functionalities that correspond to the apparatus/system of the system claims, therefore since the method claims are performing functionalities that corresponds with the apparatus/system performing the methods, the examiner rejects claim 166, with the same arguments provided above (see claim 134).

Regarding claim 167, Oyama in view of Koskiahde discloses “The system of claim 165.” The method claims disclosed above performs the functionalities that correspond to the apparatus/system of the system claims, therefore since the method claims are performing functionalities that corresponds with the apparatus/system performing the methods, the examiner rejects claim 167, with the same arguments provided above (see claim 135).

Regarding claim 168, Oyama in view of Koskiahde discloses “The system of claim 165.” The method claims disclosed above performs the functionalities that correspond to the apparatus/system of the system claims, therefore since the method claims are performing functionalities that corresponds with the apparatus/system

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performing the methods, the examiner rejects claim 168, with the same arguments provided above (see claim 136).

Regarding claim 169, Oyama in view of Koskiahde discloses “The system of claim 165.” The method claims disclosed above performs the functionalities that correspond to the apparatus/system of the system claims, therefore since the method claims are performing functionalities that corresponds with the apparatus/system performing the methods, the examiner rejects claim 169, with the same arguments provided above (see claim 137).

Regarding claim 170, Oyama in view of Koskiahde discloses “The system of claim 151.” The method claims disclosed above performs the functionalities that correspond to the apparatus/system of the system claims, therefore since the method claims are performing functionalities that corresponds with the apparatus/system performing the methods, the examiner rejects claim 170, with the same arguments provided above (see claim 138).

Regarding claim 171, Oyama in view of Koskiahde discloses “The system of claim 151.” The method claims disclosed above performs the functionalities that correspond to the apparatus/system of the system claims, therefore since the method claims are performing functionalities that corresponds with the apparatus/system performing the methods, the examiner rejects claim 171, with the same arguments provided above (see claim 139).

Regarding claim 172, Oyama in view of Koskiahde discloses “The system of claim 171.” The method claims disclosed above performs the functionalities that

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correspond to the apparatus/system of the system claims, therefore since the method claims are performing functionalities that corresponds with the apparatus/system performing the methods, the examiner rejects claim 172, with the same arguments provided above (see claim 140).

Regarding claim 173, Oyama in view of Koskiahde discloses "The system of claim 172." The method claims disclosed above performs the functionalities that correspond to the apparatus/system of the system claims, therefore since the method claims are performing functionalities that corresponds with the apparatus/system performing the methods, the examiner rejects claim 173, with the same arguments provided above (see claim 141).

Regarding claim 174, Oyama in view of Koskiahde discloses "The system of claim 172." The method claims disclosed above performs the functionalities that correspond to the apparatus/system of the system claims, therefore since the method claims are performing functionalities that corresponds with the apparatus/system performing the methods, the examiner rejects claim 174, with the same arguments provided above (see claim 142).

Regarding claim 175, Oyama in view of Koskiahde discloses "The system of claim 174." The method claims disclosed above performs the functionalities that correspond to the apparatus/system of the system claims, therefore since the method claims are performing functionalities that corresponds with the apparatus/system performing the methods, the examiner rejects claim 175, with the same arguments provided above (see claim 143).

Regarding claim 176, Oyama in view of Koskiahde discloses “The system of claim 175.” The method claims disclosed above performs the functionalities that correspond to the apparatus/system of the system claims, therefore since the method claims are performing functionalities that corresponds with the apparatus/system performing the methods, the examiner rejects claim 176, with the same arguments provided above (see claim 144).

Regarding claim 177, Oyama in view of Koskiahde discloses “The system of claim 151.” The method claims disclosed above performs the functionalities that correspond to the apparatus/system of the system claims, therefore since the method claims are performing functionalities that corresponds with the apparatus/system performing the methods, the examiner rejects claim 177, with the same arguments provided above (see claim 145).

Regarding claim 178, Oyama in view of Koskiahde discloses “The system of claim 151.” The method claims disclosed above performs the functionalities that correspond to the apparatus/system of the system claims, therefore since the method claims are performing functionalities that corresponds with the apparatus/system performing the methods, the examiner rejects claim 178, with the same arguments provided above (see claim 146).

Regarding claim 179, Oyama in view of Koskiahde discloses “The system of claim 178.” The method claims disclosed above performs the functionalities that correspond to the apparatus/system of the system claims, therefore since the method claims are performing functionalities that corresponds with the apparatus/system

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performing the methods, the examiner rejects claim 179, with the same arguments provided above (see claim 147).

Regarding claim 180, Oyama in view of Koskiahde discloses “The system of claim 152.” The method claims disclosed above performs the functionalities that correspond to the apparatus/system of the system claims, therefore since the method claims are performing functionalities that corresponds with the apparatus/system performing the methods, the examiner rejects claim 180, with the same arguments provided above (see claim 148).

Regarding claim 181, Oyama in view of Koskiahde discloses “The system of claim 152.” The method claims disclosed above performs the functionalities that correspond to the apparatus/system of the system claims, therefore since the method claims are performing functionalities that corresponds with the apparatus/system performing the methods, the examiner rejects claim 181, with the same arguments provided above (see claim 149).

Regarding claim 182, Oyama in view of Koskiahde discloses “The system of claim 181.” The method claims disclosed above performs the functionalities that correspond to the apparatus/system of the system claims, therefore since the method claims are performing functionalities that corresponds with the apparatus/system performing the methods, the examiner rejects claim 182, with the same arguments provided above (see claim 150).

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Mapa whose telephone number is (571)270-5540. The examiner can normally be reached on MONDAY TO THURSDAY 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne Bost can be reached on (571)272-7023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael Mapa/
Examiner, Art Unit 2617

/Dwayne D. Bost/
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